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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,739

05/10/2006

James C. Tiernan

5969-101

3387

36412

7590

01/21/2009

DUCKOR SPRADLING METZGER & WYNNE

A LAW CORPORATION

3043 4th Ave.

SAN DIEGO, CA 92103

EXAMINER

CLIFTON, JESSICA L

ART UNIT

PAPER NUMBER

4144

MAIL DATE

DELIVERY MODE

01/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/578,739

**Applicant(s)**

TIERNAN ET AL.

**Examiner**

JESSICA CLIFTON

**Art Unit**

4144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/20/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-73 is/are rejected.
- 7) ☒ Claim(s) 1,4,28,31,62 and 65 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/06)
- Paper No(s)/Mail Date 11/10/2008; 03/19/2008
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-73 have been examined and are pending.

#### *Claim Objections*

2. Claim 1 is objected to because of the following informalities:

The statement "...**with coupled to the presentation devices**" does not clearly state the claimed invention. Examiner will examine the claim as follows: "...**with the coupled presentation devices.**"

3. Claim 4 is objected to because the word "**provide**" should be corrected to "**provider**". Examiner will examine the claim with the aforementioned correction.

4. Claims 28, 31, 62, and 65 are objected to because of the following informalities: The word "**IR**" does not clearly state the claimed invention. Examiner will examine the claim defining "**IR**" as "**upstream control message**".

Appropriate correction is required.

#### *Drawings*

5. The informal drawings (Figures 4, 5, 6.1, 6.2) are not of sufficient quality to permit examination. Changes are necessary so that each individual article defined in the legend can be clearly discerned in the drawing.

Accordingly, replacement drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to this Office action. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

Applicant is given a TWO MONTH time period to submit new drawings in compliance with 37 CFR 1.81. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a). Failure to timely submit replacement drawing sheets will result in ABANDONMENT of the application.

### ***Specification***

6. The disclosure is objected to because of the following informalities:

Paragraph [0102], [0105], [0106] refers to Figure 3A.

Paragraph [0108] refers to Figure 3B.

Paragraph [0110] refers to Figure 3D.

Paragraph [0124], [0125], [0135], [0138], [0141], [0178], [0350], [0351], [0354], [0357], [0424], [0446], [0450], [0452], refers to Figure 6.

Paragraph [0170] refers to Figure 3A, 3B and 3C, 3D.

Paragraph [0178] refers to Figure 6A, 6B, and 6C.

Paragraph [0180] refers to Figure 6A.

Paragraph [0181] refers to Figure 6B.

Paragraph [0182] refers to Figure 6C.

Paragraph [0313], [0319], [0320] refers to Figure 3.

These figure numbers listed above do not match with the drawings. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-3, 5-31, 33, 35-65, 67, 69-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng (US Patent 5,963,557) and further in view of Grzeczowski (US Pub. No. 2003/0143946).

As per claim 1, 35, 69 and 73 Eng teaches **a method, system and unit of scalable multifunctional network communication between different devices** (Abstract, discloses point-to-point and multicast communication in a network. Figure 7, illustrates the communication between multiple devices).

Eng does not teach the specific use this network **between presentation devices and service providers**.

However, Grzeczowski teaches **network communication between presentation devices** (i.e. peripheral equipment) **and service providers** (Paragraph [0002], discloses set-top boxes capable of multiple video, audio and communication services. Paragraph [0041], discloses peripheral equipment coupled to the set-top box).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method, system and unit of Eng to include **communication between presentation devices and service providers**, as taught in Grzeczowski for the purpose of incorporating a user interface.

In view of the above, the combination of Eng- Grzeczowski teaches:

**using a group of service interface modules** (i.e. peripheral device interface)

(Grzeczowski, Figure 9, illustrates the peripheral device interface as a part of the set-top box. Figure 4, illustrates multiple set-top boxes) **for interfacing with the presentation devices** (i.e. peripheral equipment) (Grzeczowski, Paragraph [0041], discloses peripheral equipment coupled to the set-top box);

**using a group of CPE units** (i.e. set-top box/subscriber station) (Grzeczowski, Figure 4, illustrates multiple set-top boxes) **coupled to the service interface modules** (i.e. peripheral device interface) (Grzeczowski, Figure 9, illustrates the peripheral device interface as a part of the set-top box);

**using a group of CPE units** (Grzeczowski, Figure 4, illustrates multiple set-top boxes) **communicating with the coupled presentation devices** (Grzeczowski, Paragraph [0041], discloses a television to be peripheral equipment coupled to the set-top box. Paragraph [0023], discloses enhanced television viewing provided by the set-top box);

**receiving via a headend control computer upstream messages from the CPE units and sending via a headend control computer downstream messages to the CPE units** (Eng, Figure 7, illustrates a headend receiving upstream communication from a subscriber station and downstream communication from a headend to subscriber stations);

**interfacing between the headend control computer and the service providers (i.e. other networks) via a group of service provider control subsystems (i.e. headend media access controller) (Eng, Figure 14, illustrates the headend media access controller communicating with other networks); and**

**wherein the headend control computer receives messages from the CPE units** (Eng, Figure 7, illustrates the headend receiving upstream communication from the subscriber stations) **and transfers them to the service provider control subsystems** (Eng, Figure 14, discloses upstream communication provided to the headend media access controller), **and the headend control computer receives messages from the service provider control subsystems and transports them to the CPE units** (Figure 14, discloses that the headend media access controller provides data to be transferred downstream. Figure 7, illustrates the headend sending downstream communication to the subscriber stations).

As per claim 2 and 36, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **wherein the messages include service messages bearing data and control messages in the form of request messages** (Request messages are control messages which allocate communication resources. Col. 4, lines 17-23, discloses payload messages contain data and control messages for allocating communication resources).



As per claim 3 and 37, Eng-Grzeczkowski teach **a method and system according to claims 2 and 36**. Eng further teaches **wherein the request message includes a plurality of message requests from the CPE units** (Figure 9, illustrates a control channel with multiple requests capable of carrying control information from of various type and multiple subscriber stations).

As per claim 5 and 39, Eng-Grzeczkowski teach **a method and system according to claims 1 and 38**. Eng further teaches **receiving at the headend control computer request signals from the CPE units and arranging them in a request queue update message** (i.e. writing a control packet) **and sending it downstream to the CPE units** (Col. 4, lines 50-55, disclose the headend writing a control packets into the downstream channel after receiving a request message from the subscriber station).

As per claim 6 and 40, Eng-Grzeczkowski teach **a method and system according to claims 5 and 39**. Eng further teaches **receiving at the CPE units the request queue update message and adding it to their local request queues, and sending service messages from the CPE units to the headend control computer in response to the assigned time slots of the request queue** (Col. 4, lines 55-58, discloses the subscriber station receiving the control packet. The subscriber station then transmits its packets only in the assigned slots. Col. 16, lines 6-9, disclose the transmit scheduler of

the subscriber station scheduling a transmission from the queue as a result of receiving a control packet).

As per claim 7 and 41, Eng-Grzeczowski teach **a method and system according to claims 6 and 40**. Eng further teaches **receiving at the headend control computer the service messages from the CPE units and in turn distributing** (i.e. broadcasting) **them to the CPE units** (Col. 4, lines 2-15, discloses that the headend receiving messages from the subscriber station and broadcasting these messages to each subscriber station) **and service provide control subsystems** (i.e. media access controller) (Figure 14, illustrates the upstream data distributed to the media access controller).

As per claim 8 and 42, Eng-Grzeczowski teach **a method and system according to claims 1 and 35**. Grzeczowski further teaches **interconnecting each CPE and presentation devices via service interface modules** (Figure 9, illustrates the peripheral device interface connecting the set-top box to peripheral devices).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system of Eng-Grzeczowski to include **interconnecting each CPE and presentation devices via service interface modules**, as taught in Grzeczowski for the purpose of incorporating a user interface.

As per claim 9 and 43, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **interconnecting service providers and the headend control computer via service message administration control function units** (i.e. media access controller) (Figure 14, illustrates other networks interconnected to the headend media access controller).

As per claim 10 and 44, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **including sharing at least one channel using time division multiple access** (Col. 3, lines 15-16, discloses time division multiplexing).

As per claim 11 and 45, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **modulating, transmitting, acquiring, tracking** (i.e. media access control) **and demodulating signals on the uplink and downlink** (Figure 14 and Figure 10A, discloses a headend and subscriber station which includes a modulator, transmitter, receiver, media access controller, and demodulator for the uplink and downlink).

As per claim 12 and 46, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **tracking the phase of a master system clock via a local clock** (i.e. scheduler) (Col. 14, Lines 6-22, discloses that the transmit scheduler uses time stamps of the system time clock).

As per claim 13 and 47, Eng-Grzeczkowski teach **a method and system according to claims 12 and 46**. Eng further teaches **wherein for clocks synchronization purposes, the uplink is locked** (i.e. connected) **to the downlink** (Figure 10A, illustrates an upstream synchronizer with the upstream connected to the downstream).

As per claim 14 and 48, Eng-Grzeczkowski teach **a method and system according to claims 8 and 42**. Eng further teaches **including acquiring and tracking interval boundaries on the downlink** (Col. 14, Lines 32-42, discloses that the transmit scheduler makes decisions using time slot identification received from the downlink).

As per claim 15 and 49, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **wherein messages are carried in slots, and each has a message header** (Figure 9, illustrates reservation request packets in slots. Col. 11, lines 50-51, disclose that each slot includes a preamble).

As per claim 16 and 50, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **organizing and transmitting control messages via control applications** (Col. 8, lines 49-58, disclose writing and transmitting control bit streams that indicate slot assignments. Figure 9, illustrates organizing control messages into a bit stream).

As per claim 17 and 51, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **using message transmit queues and message receive queues in both the headend computer control and each CPE** (Col. 6, lines 17-19, disclose circuitry to enable the headend and the subscriber station work both as a transmitter and receiver. Col. 16, lines 6-8, disclose a queue in the subscriber station. Col. 17, lines 19-20, disclose a data buffer in the headend.)

As per claim 18 and 52, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **using at least one request queue in each one of the CPEs and the headend computer control** (Col. 16, lines 6-8, disclose a queue in the subscriber station. Col. 17, lines 19-20, disclose a data buffer in the headend).

As per claim 19 and 53, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **monitoring the downlink for the purpose of selectively inputting messages intended for it by each CPE, and for the purpose of maintaining downlink synchronization** (Col. 16, lines 6-18, discloses the transmit scheduler using downlink information to synchronize and modulate packet data).

As per claim 20 and 54, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **demodulating and decoding uplink messages via the headend computer control** (Figure 14, illustrates the headend with a demodulator decoder applied to the upstream payload).

As per claim 21 and 55, Eng-Grzeczowski teach **a method and system according to claims 1 and 35. Eng further teaches using a receive router at the headend computer control for monitoring the received messages and routing them in accordance with their message headers** (Col. 4, lines 8-15, discloses the headend examining the destination address of the packet header and transmitting the packet to the downstream channel).

As per claim 22 and 56, Eng-Grzeczowski teach **a method and system according to claims 1 and 35. Eng further teaches using transmission schedulers in each CPE** (Figure 10A, illustrates a transmit scheduler) **and the headend computer control for affecting transmission of messages** (Col. 4, lines 50-55, discloses the headend scheduling packets for transmission).

As per claim 23 and 57, Eng-Grzeczowski teach **a method and system according to claims 22 and 56. Eng further teaches regulating the length and frequency of transmitted messages so that they are within desired range-of-values by the transmission scheduler** (Col. 14, lines 28-32, discloses that the transmit scheduler determines length of slots needed for data transmission. Col. 10, lines 62-56, discloses assigning a range of frequencies).

As per claim 24 and 58, Eng-Grzeczowski teach **a method and system according to**

**claims 6 and 40.** Eng further teaches **collecting request messages and forming the request queue update message** (i.e. sending feedback) (Col. 5, lines 7-23, discloses that the headend monitors messages and sends feedback to the subscriber station).

As per claim 25 and 59, Eng-Grzeczowski teach **a method and system according to claims 24 and 58.** Eng further teaches **receiving requests update messages** (Col. 15, lines 17-19, disclose receiving an acknowledgment control packet) **and placing the messages contained therein in a request queue under the control of an insertion algorithm** (Figure 13, illustrates scheduling a transmission in response to the feedback status. Col. 12, lines discloses a pending transmission queue. Col. 15, lines 29-41, discloses obtaining feedback and updating algorithm parameters to form a retransmission message response).

As per claim 26 and 60, Eng-Grzeczowski teach **a method and system according to claims 1 and 35.** Eng further teaches **wherein each CPE utilizing a request synchronization algorithm control application** (i.e. contention resolution algorithm) **for determining that the CPE's local request is identical to the master request for synchronization purposes** (Synchronization occurs when the message from the subscriber station transmits only in the assigned slots allocated by the headend message. Col. 4, lines 50-64, disclose that a collision may occur when the message from the subscriber is not synchronized with the slot assignment received from the headend. Col. 5, lines 7-23, discloses contention resolution using feedback from the

headend and a collision resolution algorithm).

As per claim 27 and 61, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **synchronizing the local request** (i.e. message from subscriber station) **with the master request** (i.e. message from the headend indicating assigned slots) **by a request synchronization algorithm** (Synchronization occurs when the message from the subscriber station transmits only in the assigned slots allocated by the headend message. Col. 4, lines 50-64, disclose that a collision may occur when the message from the subscriber is not synchronized with the slot assignment received from the headend. Col. 5, lines 7-23, discloses contention resolution using feedback from the headend and a collision resolution algorithm).

As per claim 28 and 62, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **wherein a request insertion algorithm** (i.e. process) **of a CPE is request synchronized, and establishes and maintains a upstream** (i.e. subscriber station to headend) **control message transmit times for a substantial number of upstream control messages in the local request queue** (Col. 15, lines 7-16, discloses setting a feedback timer using message transmit times and propagation delay incurred by sending messages. Figures 12 & 13, illustrates the subscriber station setting and maintaining a timer for transmitting messages in synchronization with the headend acknowledgements from the data queue).



As per claim 29 and 63, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35. Eng further teaches registering each CPE, the registering including determining a CPE offset, the offset being the propagation time on the downlink between each CPE and the headend control computer** (Col. 3, lines 49-54, discloses that each subscriber station is polled and transmits a signal to the headend. The headend records the propagation delay and informs the subscriber station).

As per claim 30 and 64, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35. Eng further teaches wherein each CPE contains a set of messages to be transmitted in a message transmit queue** (Col. 16, lines 6-9, discloses a subscriber station with a queue containing pending data to be transmitted).

As per claim 31 and 65, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35. Eng further teaches selecting an upstream control message for transmission by means of a transmission scheduler, and determining the order of upstream control message selection for transmission based on characteristics (i.e. start slot indication and number of granted slots) of the upstream control message message** (Col. 16, lines 13-18, discloses using a transmit scheduler to properly synchronize the segmentation and modulation of packet data with assigned slots. The synchronization is based the start slot indication and number of granted slots).

As per claim 32 and 66, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **wherein each CPE includes a transmission scheduler** (Figure 10A, illustrates a transmit scheduler within the subscriber station).

Eng-Grzeczkowski is silent on **selecting Aloha slots for transmission of a request message**.

However, Albrow discloses **selecting Aloha slots for transmission of a request message** (Col. 4, lines 56-65, discloses a subscriber unit selects an Aloha slot and then transmits a message according to the selected slot).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system of Eng-Grzeczkowski to include **selecting Aloha slots for transmission of a request message**, as taught in Albrow for the purpose of avoiding overload of the network.

As per claim 33 and 67, Eng-Grzeczkowski-Albrow teach **a method and system according to claims 32 and 66**. Eng further teaches **wherein the transmission scheduler determines that a request message caused to be transmitted has suffered contention (i.e. collision), and thus is prevented from being successfully received by the headend computer control** (Col. 15, lines 29-51, discloses the transmit scheduler initiates retransmission once it is determined that a collision has occurred. Col. 5, lines 19-22, discloses that the subscriber station determines that a packet has collided and was not received by the headend).

As per claim 70, Eng-Grzeczowski teach **a unit according to claims 69**. Eng further teaches **wherein the messages include service messages bearing data and control messages in the form of request messages** (Request messages are control messages which allocate communication resources. Col. 4, lines 17-23, discloses payload messages contain data and control messages for allocating communication resources).

As per claim 71, Eng-Grzeczowski teach **a unit according to claims 69**. Grzeczowski further teaches **a group of service interface modules** (i.e. peripheral device interface) (Figure 9, illustrates the peripheral device interface connecting the set-top box to peripheral devices).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the unit of Eng-Grzeczowski to include **a group of service interface modules**, as taught in Grzeczowski for the purpose of incorporating a user interface.

As per claim 72, Eng-Grzeczowski teach **a unit according to claims 71**. Eng further teaches **means for receiving requests from the CPE units and arranging them in a request queue update message** (i.e. writing a control packet) **and sending it downstream to the CPE units** (Col. 4, lines 50-55, disclose the headend writing a

control packets into the downstream channel after receiving a request message from the subscriber station).

8. Claims 4, 32, 38, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Eng-Grzeczkowski as applied in claims 1 and 35 above and further in view of Albrow et al. (US Patent No. 6,038,213).

As per claim 4 and 38, Eng-Grzeczkowski teaches **a method and system according to claims 1 and 35**. Eng further teaches **receiving the message requests** (i.e. control messages) **at the CPE units** (Figure 7, illustrates communication to the subscriber station receiving control message communication) **and selecting at least one of them as a time slot for sending at least one request message upstream to the headend control computer**(Col. 3, lines 12-24, discloses writing messages into time slots.

Figure 1, illustrates sending upstream communication to the headend controller).

Eng-Grzeczkowski is silent on the time slot being an **Aloha time slot**.

However, Albrow discloses selecting an **Aloha time slot** (Col. 4, lines 56-65, discloses a subscriber unit selects an Aloha slot and then transmits a message according to the selected slot).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system of Eng-Grzeczkowski to include an **Aloha time slot**, as taught in Albrow for the purpose of avoiding overload of the network.

As per claim 32 and 66, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng further teaches **wherein each CPE includes a transmission scheduler** (Figure 10A, illustrates a transmit scheduler within the subscriber station).

Eng-Grzeczkowski is silent on **selecting Aloha slots for transmission of a request message**.

However, Albrow discloses **selecting Aloha slots for transmission of a request message** (Col. 4, lines 56-65, discloses a subscriber unit selects an Aloha slot and then transmits a message according to the selected slot).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system of Eng-Grzeczkowski to include **selecting Aloha slots for transmission of a request message**, as taught in Albrow for the purpose of avoiding overload of the network.

9. Claims 34 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Eng-Grzeczkowski as applied in claims 1 and 35 above and further in view of Dorenbosch et al. (US Patent No. 6,023,230).

As per claim 34 and 68, Eng-Grzeczkowski teach **a method and system according to claims 1 and 35**. Eng-Grzeczkowski is silent on **generating interval requests for Aloha intervals by means of an Aloha slot supply algorithm in the headend control computer**.

However, Dorenbosch teaches **generating interval requests for Aloha intervals** (i.e. time slots) **by means of an Aloha slot supply algorithm in the headend control computer** (i.e. controller)(Col. 6, lines 12-25, disclose that the controller is responsible for sending a message notifying of time slots to receive and acknowledge messages using an Aloha contention algorithm).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system of Eng-Grzechowski to include **generating interval requests for Aloha intervals by means of an Aloha slot supply algorithm in the headend control computer**, as taught in Dorenbosch for the purpose of providing wide area coverage using multiple frequencies.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Rao (US Patent No. 5,940,738) discloses a video pedestal network. Hendricks et al. (US Patent No. 6,160,989) discloses a network controller for cable television delivery system. Hendricks et al. (US Patent No. 6,201,536) discloses a network manager for cable television system headends. Safadi (US Patent No. 5,572,517) discloses configurable hybrid medium access control for cable metropolitan area networks. Spinar et al. (US Pub. No. 2002/0080816) discloses a method and system for adaptively obtaining bandwidth allocation requests. Kubbar (US Patent No. 6,801,537) disclose an adaptive contention algorithm based on truncated binary exponential back-off.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA CLIFTON whose telephone number is (571)270-7156. The examiner can normally be reached on Monday-Thursday, 8:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. C./

**Examiner, Art Unit 4144**

/Taghi T. Arani/

Supervisory Patent Examiner, Art Unit 4144